Rakib Ahmed

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Experience

The City Bank PLC

Senior Software Development Officer

On-site (Dhaka, Bangladesh) Mar 2022 - Present

- Languages/Frameworks/Tools: Java, Spring Boot, Microservices, ELK Stack, REST API, SOAP API, Docker, Kafka, Oracle, MySQL, React, Git.
- o Projects: CityLive, CityTouch, Bancassurance.
- o Responsibilities:
 - * Spearheaded the development of CityLive, a digital corporate banking system, utilizing Java, Spring Boot, React, Docker, and Microservices to enable 24/7 banking transactions globally. Architected and implemented microservices-based solutions to enhance scalability and maintainability of the CityLive platform.
 - * Developed and enhanced the CityTouch application, focusing on improving NPSB and BEFTN payment systems for seamless transactions. Integrated virtual debit and prepaid cards into the CityTouch platform, providing users with more flexible payment options.
 - * Optimized database operations using Oracle and PostgreSQL, ensuring efficient data management and retrieval.
 - * Led the Bancassurance project, implementing a verification document upload system and secure file transfer to SFTP servers.
 - * Ensured compliance with banking regulations and security standards throughout the software development lifecycle.
 - * Collaborated with cross-functional teams, including business analysts, QA engineers, and system architects, to deliver high-quality software solutions.
 - * Conducted code reviews, mentored junior developers, and promoted best practices in software development. Implemented CI/CD pipelines using Jenkins and Docker, streamlining the deployment process and reducing time to
 - * Managed project tasks and timelines using agile methodologies, participating in sprint planning, daily stand-ups, and retrospectives.

Apurba Technologies Ltd.

Hybrid (Dhaka, Bangladesh)

Nov 2020 - Feb 2022

Software Engineer

- Languages/Frameworks/Tools: Microservices, Java, Spring Boot, MySQL, REST API, Docker, Kubernetes, Jira, Git.
- o Projects: National Bangla Screen Reader (SD-16), Bangla Font Interoperability (SD-12)
- Responsibilities:
 - * Developed and maintained software solutions for National Bangla Screen Reader and Bangla Font Interoperability
 - * Collaborated closely with the ICT Ministry of Bangladesh to gather requirements and ensure alignment with national standards and regulations.
 - * Implemented RESTful APIs using Spring Boot to facilitate seamless data exchange between services.
 - Optimized MySQL database performance, ensuring high availability and reliability of the software systems. Utilized Docker for containerization, enabling consistent deployment across multiple environments.
 - * Employed agile methodologies, participating in sprint planning, daily stand-ups, and retrospectives to ensure timely delivery of project milestones.
 - * Managed project tasks and progress using Jira, ensuring transparent and efficient workflow management. Collaborated with cross-functional teams to deliver high-quality software solutions, including designers, testers, and project managers.

Skills Summary

- Programming Languages: Java, Python, C#, JavaScript, C, C++
- Backend Technologies: Spring Boot, Microservices, Spring MVC, Maven, Hibernate, REST API, SOAP API
- Frontend Technologies: React, TypeScript, Tailwind CSS, d3.js
- Machine Learning Technologies: Scikit-learn, NLTK, SpaCy, Tensorflow, Keras, PyTorch, Numpy, Pandas
- Databases: MongoDB, Oracle, PostgreSQL, MySQL, SQLite
- Other Tools/Technologies: ELK Stack, Selenium, Kafka, RabbitMQ, Kubernetes, Docker, Postman, SOAP UI, Tomcat, Git, LaTeX
- Soft Skills: Leadership, Event Management, Writing, Public Speaking, Time Management, Communication

Education

University of Liberal Arts Bangladesh

Dhaka, Bangladesh

Bachelor of Science - Computer Science and Engineering

Feb 2019 - Oct 2022

Started studying as a credit transferred student.

Relevant Courses: Data Structures and Algorithms, Software Engineering, Artificial Intelligence, Machine Learning, System Design. **CGPA:** 3.39 out of 4.00

Personal Projects

- Bengali Parts-of-Speech Tagger (Machine Learning, NLP): Created and deployed a Parts-of-Speech tagger that can predict the Parts-of-Speech of a given word or sequence. The Model was trained on a Bengali handcrafted dataset with Morpho-syntactic features. The Model has achieved 98.39% of accuracy. Architecture: LSTM, Bidirectional LSTM, GRU. Tech: Python, Tensorflow, Keras, JavaScript, HTML5, CSS, FastAPI, Heroku.
- Bengali Next Word Prediction towards Sentence Completion (Machine Learning, NLP): Created and deployed a System that can predict the next word of a given word or sequence and complete the whole sentence. The Model was trained on a Bengali dataset containing 78 thousand tokens. The Model has achieved 84.13% of accuracy. Architecture: LSTM, Bidirectional LSTM, GRU. Tech: Python, Tensorflow, Keras, JavaScript, HTML5, CSS, FastAPI, Heroku.
- Profile Management System (Web Development): A system that manages the profile and its information. Users can log in and log out from the website and can visit other users' profiles as well. Tech: React JS, Spring Boot, MySQL.
- Video Recorder using Webcam (Desktop Application, Recorder): This project is a windows operating system-based application in which users can record their video using their computer's webcam, and the audio will be recorded through the microphone. This project digitally records videos in computer desktop activity over time. Tech: C#, OpenCVSharp, BasicAudio, FFMpeg, DirectShowLib.

Achievements

- IEEEXtreme 15.0 (Country Rank: 8 | Global Rank: 271 | Team Name: DisjointSkillUnion) Oct, 2021
- International Collegiate Programming Contest ICPC (Regional Participant) Oct 2021
- Google Code Jam (Qualification Round Participant) Aug 2021
- CTO Forum Innovation Hackathon (Prototype Round Qualifier) Sep 2021
- Google Kick Start, Round F (Country Rank: 17 | Global Rank: 1176) Sep 2020
- Facebook Hackercup (Qualification Round Participant) Jul 2020

Research & Publications

• Submitted Research | A Deep Learning based approach for predicting the next word towards sentence completion & determining parts of speech with morphosyntactic features of the Bengali Language: The paragraph discusses the importance of Parts-of-Speech (POS) labeling in Natural Language Processing tasks and describes recent developments in Bengali POS taggers and POS tagger. It also mentions how LSTM and GRU were combined to develop a POS tagger and how Bengali's rich morphology is used in the development process. The study uses a 78 thousands token hand-annotated corpus and a tagset of 31 tags. It also briefly mentions the lack of next-word prediction typing utilities for Bengali and the possibility of using Deep Learning algorithms trained with a properly curated dataset to implement such a model.

Supervisor: Bijan Paul, Senior Lecturer, Department of CSE, University of Liberal Arts Bangladesh.

• Conference Proceedings | Smart System to Reduce High Beam Glare: 7th Edition of ICT for Sustainable Development (ICT4SD) 2022, Scopus indexed publication.

Publisher: Springer Nature.

DOI: https://doi.org/10.1007/978 - 981 - 19 - 5224 - 1₃7

Supervisor: Bijan Paul, Senior Lecturer, Department of CSE, University of Liberal Arts Bangladesh.

Co-curricular Experience

President at ULAB Computer Programming Club

Dhaka, Bangladesh

University of Liberal Arts Bangladesh

Jan 2021 - Jun 2022

• Responsibilities: Communicating with the internal and external communities of ULAB for organizing various events, and delegating the required tasks to the other executive members.

Webmaster at IEEE ULAB Student Branch

Dhaka, Bangladesh

 $University\ of\ Liberal\ Arts\ Bangladesh$

 $May\ 2021\ -\ Mar\ 2022$

• Responsibilities: Developed and maintained the IEEE ULAB Student Branch website and prepared the contents.

Problem Setter in ULAB Take off Programming Contest

Dhaka, Bangladesh

University of Liberal Arts Bangladesh

Feb 2021 - Oct 2021

• Responsibilities: Set unique problems and test cases for the biggest Intra-University Programming Contest of the University of Liberal Bangladesh.

Competitive Programming Trainer

Dhaka, Bangladesh

University of Liberal Arts Bangladesh

Feb 2021 - Oct 2021

• Responsibilities: Trained over 3000 students for the various National & International Programming Contests of University of Liberal Bangladesh.

References

• Mrinmoy Mazumdar: Assistant Manager, Information Technology, The City Bank PLC.

^{*}More available upon request.